What is claimed:

1. A compound comprising: **(a)** a hormone domain selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, bLH, estrogen, testosterone, luteinizing hormone, chorionic gonadotropin, follicle stimulating hormone, melanocyte-stimulating hormone, estradiol, dopamine, somatostatin, and analogues of these hormones; and **(b)** a lytic peptide domain.

2. A compound as recited in Claim 1, wherein said hormone domain is bonded directly to said lytic peptide domain, without an intermediate linking domain joining said hormone domain to said lytic peptide domain.

3. A compound as recited in Claim 1, wherein said lytic peptide domain is selected from the group consisting of a cecropin peptide, a melittin peptide, a defensin peptide, a magainin peptide, a sarcotoxin peptide, and analogs of said peptides.

4. A compound as recited in Claim 1, wherein said lytic peptide domain comprises hecate.

5. A compound as recited in Claim 1, wherein said hormone domain comprises I-LHRH-III.

6. A compound as recited in Claim 1, wherein said hormone domain comprises gonadotropin-releasing hormone.

7. A compound as recited in Claim 1, wherein said compound has the sequence SEQ. ID NO. 3 or SEQ. ID NO. 4.

8. A compound as recited in Claim 1, wherein said compound has the sequence SEQ. ID NO. 12 or SEQ. ID NO. 15.

9. A compound as recited in Claim 1, wherein said hormone domain comprises estrogen.

10. A compound as recited in Claim 1, wherein said hormone domain comprises testosterone.

11. A compound as recited in Claim 1, wherein said hormone domain comprises luteinizing hormone.

12. A compound as recited in Claim 1, wherein said hormone domain comprises chorionic gonadotropin.

13. A compound as recited in Claim 1, wherein said hormone domain comprises follicle stimulating hormone.

14. A compound as recited in Claim 1, wherein said hormone domain comprises melanocyte-stimulating hormone.

15. A compound as recited in Claim 1, wherein said hormone domain comprises estradiol.

16. A compound as recited in Claim 1, wherein said hormone domain comprises dopamine.

17. A compound as recited in Claim 1, wherein said hormone domain comprises somatostatin.

18. A compound as recited in Claim 1, wherein said hormone domain, or said lytic peptide domain, or both comprise D-conformation amino acid residues.

19. A compound as recited in Claim 18, additionally comprising a carrier domain to facilitate uptake by the intestine when the compound is administered orally.

20. A compound as recited in Claim 19, wherein said carrier domain comprises a vitamin B_{12} domain.

21. A method for producing long-term contraception or sterility in an animal, comprising administering to the animal an effective amount of: **(a)** a hormone selected from the group consisting of gonadotropin-releasing hormone, bLH, and I-LHRH-III, and **(b)** an effective amount of a lytic peptide.

22. A method as recited in Claim 21, wherein the lytic peptide is administered after the hormone is administered.

23. A method as recited in Claim 21, wherein the animal is a mammal.

24. A method as recited in Claim 21, wherein the animal is a bird.

25. A method as recited in Claim 24, wherein the bird is a chicken or a turkey.

26. A method as recited in Claim 21, wherein the animal is an insect.

27. A method as recited in Claim 26, wherein the hormone and the lytic peptide are expressed by an exogenous gene in a plant consumed by the insect.

28. A method as recited in Claim 21, wherein the hormone, or the lytic peptide, or both comprise D-conformation amino acid residues.

29. A method as recited in Claim 28, wherein the compound containing D-conformation amino acid residues additionally comprising a carrier domain to facilitate uptake by the intestine when the compound is administered orally.

30. A method as recited in Claim 29, wherein the carrier domain comprises a vitamin B_{12} domain.

31. A method for producing long-term contraception or sterility in an animal, comprising administering to the animal an effective amount of a compound comprising a hormone domain and a lytic peptide domain, wherein said hormone domain is selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, and bLH.

32. A method as recited in Claim 31, wherein the hormone domain is bonded directly to the lytic peptide domain, without an intermediate linking domain joining the hormone domain to the lytic peptide domain.

33. A method as recited in Claim 31, wherein the lytic peptide domain is selected from the group consisting of a cecropin peptide, a melittin peptide, a defensin peptide, a magainin peptide, a sarcotoxin peptide, and analogs of said peptides.

34. A method as recited in Claim 31, wherein the lytic peptide domain comprises hecate.

35. A method as recited in Claim 31, wherein the compound has the sequence SEQ. ID NO. 3.

36. A method as recited in Claim 31, wherein the compound has the sequence SEQ. ID NO. 4.

37. A method as recited in Claim 31, wherein the compound has the sequence SEQ. ID NO. 12 or SEQ. ID NO. 15.

38. A method as recited in Claim 31, wherein the animal is a mammal.

39. A method as recited in Claim 31, wherein the animal is a bird.

40. A method as recited in Claim 39, wherein the bird is a chicken or a turkey.

41. A method as recited in Claim 31, wherein the animal is an insect.

42. A method as recited in Claim 41, wherein the peptide is expressed by an exogenous gene in a plant consumed by the insect.

43. A method of temporarily restoring fertility in a mammal that had been made sterile by the selective destruction of gonadotropes in the pituitary, comprising administering to the mammal an effective amount of gonadotropin-releasing hormone or I-LHRH-III.

44. A method as recited in Claim 43, wherein fertility is restored in a mammal that had previously been made sterile by administering to the animal an effective amount of: **(a)** a hormone selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, and bLH, and **(b)** an effective amount of a lytic peptide.

45. A method as recited in Claim 43, wherein fertility is restored in a mammal that had previously been made sterile by administering to the animal an effective amount of a compound comprising a hormone domain and a lytic peptide domain, wherein said hormone domain is selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, and bLH.

46. A plant containing an exogenous gene that encodes a peptide comprising a hormone domain and a lytic peptide domain, wherein said hormone domain is selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, and bLH.

47. A plant containing a first exogenous gene that encodes gonadotropin-releasing hormone or that encodes I-LHRH or that encodes bLH, and a second exogenous gene that encodes a lytic peptide.

48. A method for killing or inhibiting the growth of a cell in a hormone-dependent or ligand-dependent tumor in a mammal, comprising administering to the mammal an effective amount of the hormone or ligand on which the growth of the tumor depends, and an effective amount of a lytic peptide.

49. A method as recited in Claim 48, wherein the lytic peptide is administered after the hormone or ligand is administered.

50. A method as recited in Claim 48, wherein the hormone or ligand and the lytic peptide are each administered by administering to the mammal a compound in which the hormone or ligand and the lytic peptide are chemically bonded to one another.

51. A method as recited in Claim 48, wherein the cell is part of an ovarian cancer, and wherein the hormone or ligand comprises estradiol.

52. A method as recited in Claim 48, wherein the cell is part of a breast cancer, and wherein the hormone or ligand comprises estradiol.

53. A method as recited in Claim 48, wherein the cell is part of a prostate cancer, and wherein the hormone or ligand comprises testosterone.

54. A method as recited in Claim 48, wherein the cell is part of a prolactinoma, and wherein the hormone or ligand comprises dopamine.

55. A method as recited in Claim 48, wherein the cell is part of a growth hormone-secreting adenoma, and wherein the hormone or ligand comprises growth hormone.

56. A method as recited in Claim 48, wherein the cell is part of a thyrotropin-releasing hormone-secreting adenoma, and wherein the hormone or ligand comprises thyrotropin-releasing hormone.

57. A method as recited in Claim 48, wherein the cell is part of a gonadotropin-secreting adenoma, and wherein the hormone or ligand comprises gonadotropin.

58. A method as recited in Claim 48, wherein the cell is part of a growth hormone-secreting adenoma, and wherein the hormone or ligand comprises somatostatin.

59. A method as recited in Claim 48, wherein the cell is part of a pituitary adenoma, and wherein the hormone or ligand is selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, corticosteroid-releasing hormone, growth hormone-releasing hormone, vasoactive intestinal polypeptide, and pituitary adenylate cyclase activating peptide.

60. A method as recited in Claim 48, wherein the cell is part of a breast cancer, and wherein the hormone or ligand comprises gonadotropin-releasing hormone or I-LHRH-III.

61. A method as recited in Claim 48, wherein the cell is part of an ovarian cancer, and wherein the hormone or ligand comprises gonadotropin-releasing hormone, I-LHRH-III, or bLH.

62. A method as recited in Claim 48, wherein the cell is part of a prostate cancer, and wherein the hormone or ligand comprises gonadotropin-releasing hormone or I-LHRH-III.

63. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 1, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

64. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 2, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

65. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 3, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

66. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 4, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

67. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 5, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

68. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 6, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

69. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 7, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

70. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 8, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

71. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 9, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

72. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 10, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

73. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 11, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

74. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 12, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

75. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 13, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

76. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 14, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

77. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 15, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

78. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 16, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

79. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 17, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

80. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 18, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

81. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 19, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

82. A method for killing or inhibiting the growth of a cell in a hormone-dependent tumor in a mammal, comprising administering to the mammal an effective amount of a compound as recited in Claim 20, wherein the hormone domain of the compound comprises the hormone on which the tumor is dependent.

83. A method for killing or inhibiting the growth of a cell in a mammal, wherein the activity of the cell is dependent on the binding of a receptor on the cell surface to a ligand, said method comprising administering to the mammal an effective amount of the ligand on which the activity of the cell depends, and an effective amount of a lytic peptide.

84. A method as recited in Claim 83, wherein the lytic peptide is administered after the ligand is administered.

85. A method as recited in Claim 84, wherein the ligand and the lytic peptide are each administered by administering to the mammal a compound in which the ligand and the lytic peptide are chemically bonded to one another.

86. A method as recited in Claim 83, wherein the cell is a lymphocyte responsible for an autoimmune reaction, and wherein the ligand comprises an epitope to which the lymphocyte selectively binds.

87. A method as recited in Claim 83, wherein the cell is a virally-infected cell that displays a surface receptor not displayed by otherwise similar, but uninfected cells, and wherein the ligand selectively binds to the surface receptor.

88. A method for inhibiting the reproductive ability of an insect, comprising administering to the insect an effective amount of a lytic peptide.

89. A method as recited in Claim 88, wherein the lytic peptide is selected from the group consisting of a cecropin peptide, a melittin peptide, a defensin peptide, a magainin peptide, a sarcotoxin peptide, and analogs of said peptides.

90. A method as recited in Claim 88, wherein the lytic peptide comprises L-hecate.

91. A method as recited in Claim 88, wherein the lytic peptide comprises D-hecate.

92. A method as recited in Claim 88, wherein the lytic peptide is expressed by an exogenous gene in a plant consumed by the insect.

93. A method as recited in Claim 92, wherein the lytic peptide expressed by the plant comprises L-hecate.

94. A plant containing an exogenous gene that encodes L-hecate.

95. A method as recited in Claim 23, wherein the mammal is a dog.

96. A method as recited in Claim 23, wherein the mammal is a cat.

97. A method as recited in Claim 23, wherein the mammal is a cow or bull.

98. A method as recited in Claim 23, wherein the mammal is a pig.

99. A method as recited in Claim 23, wherein the mammal is a horse.

100. A method as recited in Claim 23, wherein the mammal is a sheep.

101. A method as recited in Claim 23, wherein the mammal is a human.

102. A method as recited in Claim 21, wherein the animal is a mollusc.

103. A method as recited in Claim 102, wherein the mollusc is a zebra mussel.

104. A method as recited in Claim 102, wherein the mollusc is an oyster.

105. A method as recited in Claim 38, wherein the mammal is a dog.

106. A method as recited in Claim 38, wherein the mammal is a cat.

107. A method as recited in Claim 38, wherein the mammal is a cow or bull.

108. A method as recited in Claim 38, wherein the mammal is a pig.

109. A method as recited in Claim 38, wherein the mammal is a horse.

110. A method as recited in Claim 38, wherein the mammal is a sheep.

111. A method as recited in Claim 38, wherein the mammal is a human.

112. A method as recited in Claim 31, wherein the animal is a mollusc.

113. A method as recited in Claim 112, wherein the mollusc is a zebra mussel.

114. A method as recited in Claim 112, wherein the mollusc is an oyster.

115. A method for selectively killing gonadotrophic cells in the pituitary of an animal, comprising administering to the animal: **(a)** an effective amount of a hormone selected from the group consisting of gonadotropin-releasing hormone and I-LHRH-III, and **(b)** an effective amount of a lytic peptide.

116. A method for selectively killing gonadotrophic cells in the pituitary of an animal, comprising administering to the animal an effective amount of a compound comprising a hormone domain and a lytic peptide domain, wherein said hormone domain is selected from the group consisting of gonadotropin-releasing hormone and I-LHRH-III.

117. A method for selectively killing neurons having gonadotrophic receptors in an animal, comprising administering to the animal: **(a)** an effective amount of a hormone selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, and bLH, and **(b)** an effective amount of a lytic peptide.

118. A method for selectively killing neurons having gonadotrophic receptors in an animal, comprising administering to the animal an effective amount of a compound comprising a hormone domain and a lytic peptide domain, wherein said hormone domain is selected from the group consisting of gonadotropin-releasing hormone, I-LHRH-III, and bLH.

119. A method as recited in Claim 21, wherein the animal is sexually immature.

120. A method as recited in Claim 31, wherein the animal is sexually immature.

121. A method as recited in Claim 23, wherein the mammal is sexually immature.

122. A method as recited in Claim 38, wherein the mammal is sexually immature.

123. A method as recited in Claim 48, wherein the cell is part of an ovarian cancer, and wherein the hormone or ligand comprises I-LHRH-III.

124. A method as recited in Claim 48, wherein the cell is part of a prostatic cancer, and wherein the hormone or ligand comprises I-LHRH-III.

125. A method as recited in Claim 48, wherein the cell is part of a breast cancer, and wherein the hormone or ligand comprises I-LHRH-III.

126. A method as recited in Claim 48, wherein the cell is part of an endometrial cancer, and wherein the hormone or ligand comprises I-LHRH-III.

127. A compound as recited in Claim 1, wherein said hormone domain comprises bLH.

128. A method as recited in Claim 48, wherein the cell is part of a testicular cancer, and wherein the hormone or ligand comprises gonadotropin-releasing hormone, I-LHRH-III, or bLH.